

Appendix 2A Source Reduction

Introduction

Since 1980 source reduction has been the preferred waste management practice in the State of Minnesota. The Metropolitan Solid Waste Management Policy Plan (1997) establishes source reduction as the highest priority in the planning for and development of the regional solid waste system. The Regional/County Solid Waste Master Plan (1998) establishes goals and outcomes for regional source reduction.

Waste reduction makes economic and environmental sense. If waste is reduced the cost of managing waste is avoided, as are some production and handling costs. Research shows that waste reduction avoids air, land and water impacts related to the manufacture and disposal of materials.

The metropolitan area has established source reduction outcomes in the Master Plan for 2005 – 2017, at 1999 waste generation rates. That is, the Plan seeks to keep the waste generation rates at that level through 2017. Should that outcome be met, it means that 429,000 fewer tons would be generated in the metropolitan area in 2017 than would have been if waste generation continued to grow at the same rate as it did in the early 1990's.

As the following analysis shows, waste growth trends under the current waste management system are countering the counties' efforts to achieve the regional source reduction goal.

Ramsey and Washington Counties Waste Growth: 1990 - 2000

In 1990 the total amount of waste managed from the Counties (including solid waste, recyclables, yard waste, problem waste, etc.) was about 567,000 tons, with 432,000 generated in Ramsey County and 135,000 in Washington County. In 1996 the amount managed was about 804,000 tons, with 635,000 generated in Ramsey County and 169,000 in Washington County. In 2000 the amount managed grew to about 965,000 tons, with Ramsey County generating about 765,000 tons and in Washington County about 200,000 tons.

The growth rate of total solid waste managed from the Counties is presented below with two comparisons: a ten-year period from 1990 to 2000 and a four-year period from 1996 to 2000.

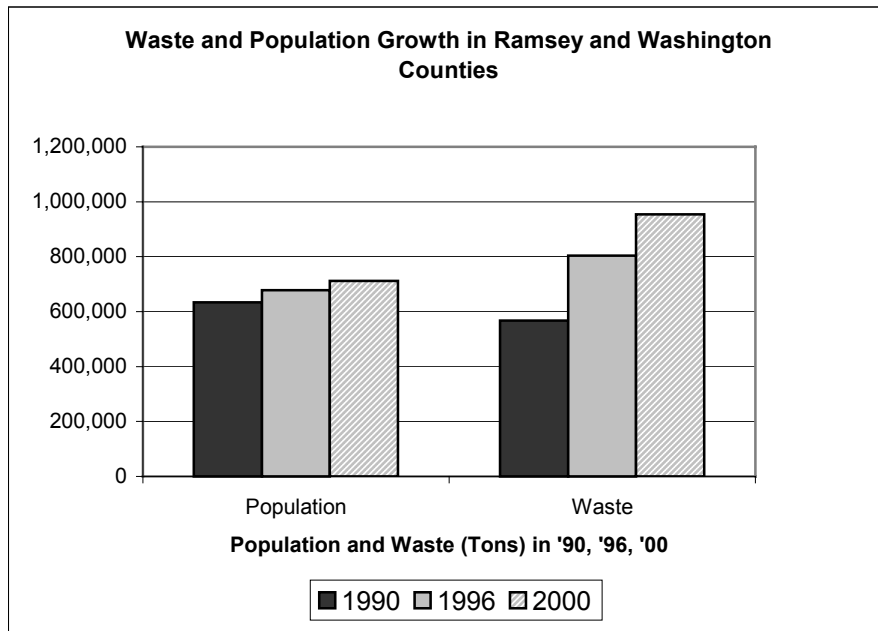
	1990-2000	1996-2000
Ramsey	77%	20%
Washington	48%	18%
R/W	70%	20%

A graph of growth in solid waste is shown below:



Waste and Population Growth

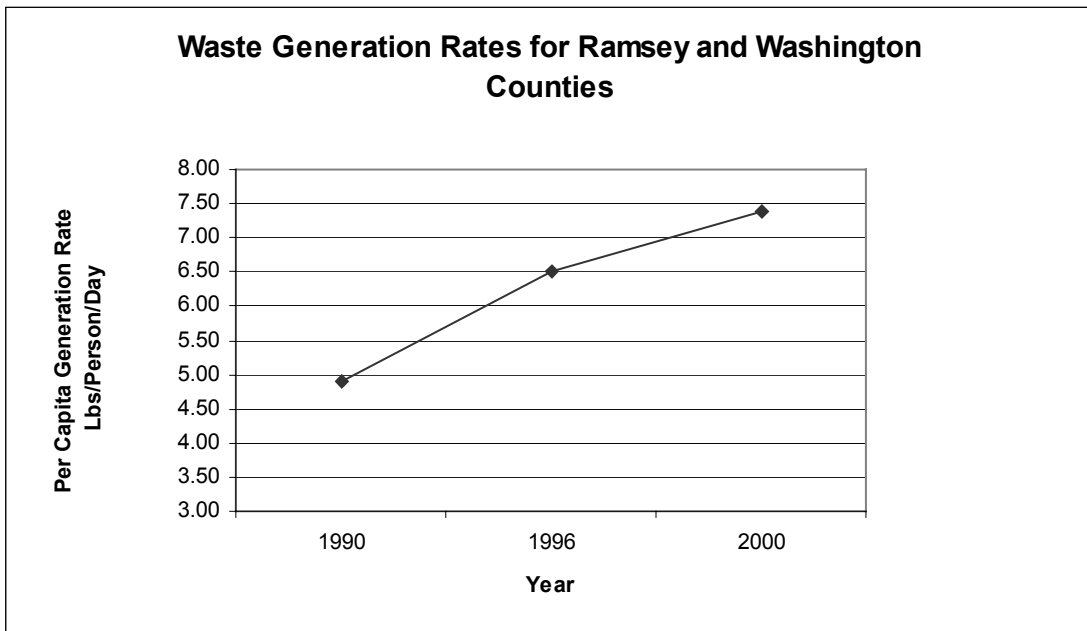
As the chart below shows, waste volumes increased faster than population during the 1990's. *While population in the two Counties grew 13% from 1990 – 2000, waste increased by 70%; while population grew 5% from 1996 – 2000, waste grew 20%.*



The population of the two Counties in 1990 was 631,663, resulting in a per capita generation rate 0.90 tons per year, or 4.9 pounds per person per day.

By 1996, the population grew to 677,809 for the two Counties, with a per capita generation rate of 1.19 tons of waste per year, or 6.5 pounds per person per day.

With a population in 2000 of 712,165, the per capita generation rate for the two Counties rose to 1.35 tons of waste per year, or 7.4 pounds per person per day.



Waste and Employment Growth

It is believed that the strong economy in the 1990's fueled the growth of waste during that time. In fact, employment grew faster than population in the two Counties during the booming economy of 1996-2000. Ramsey County added about 22,000 jobs and Washington County added over 14,000 jobs from 1996 – 2000, a growth rate nearly double that of population growth. ***While employment in the two Counties grew 10% from 1996 – 2000, waste grew 20%.***

	1996	2000	Change	% Change
Ramsey Employment	311,790	333,872	22,082	7.1%
Washington Employment	52,605	67,018	14,413	27.4%
R/W Employment	364,395	400,890	36,495	10.0%

The argument that business activity may have had a more significant role than population growth had in waste growth is strengthened in a comparison of waste per capita and waste per employee. Assuming that about half of the waste in the two counties was generated by commercial activity, each employee generated 1.20 tons of waste in 2000, while each resident generated 0.68 tons.

Long-term Growth Rate Projections

The metropolitan counties projected waste growth over the next several decades at 2.25% annually, based on the rate of the early 1990's. If waste managed from Ramsey and Washington Counties grows at the pace of 2.25% per year, the following depicts the amount of waste projected to be generated in the Counties:

